

OPTIMASS 7010 C and 7110 C

Mass flowmeters with integrated
Modbus converter



- Modbus communication direct from meter; no need for separate converter
- Connection using standard, off-the-shelf, four-core cable
- Cost effective solution since no converter needed
- Applicable for Ex and non-Ex installation
- Full functionality through using Modbus communication:
 - all measured variables
 - ability to program meter
 - sensor and process diagnostics
- Full range of sensor materials, connections and options available

OPTIMASS - Coriolis Mass Flowmeters

The new OPTIMASS 7010 C and 7110 C mass flowmeters implement all sensor drive and signal evaluation functions into an integrated front-end electronics module permanently fixed to the sensor.

This new cost effective solution eliminates unwanted and expensive I/O and display functions associated with traditional signal converters and transmitters, and is designed for use in OEM systems or packages where a PLC or DCS is already used for other functions.

Modbus communications

A simple 4-wire (1 pair data and 1 pair power) interface is all that is required to connect the OPTIMASS meter to the PLC or DCS, utilising its embedded Modbus RTU over RS485 connection. This allows programming, commissioning and measurement over a single data connection.

Fully specified for process applications

OPTIMASS 7010 C and 7110 C mass flowmeters have class leading specifications for measurement accuracy.

All familiar functions for measurements (flow, density and concentration) and diagnostics (meter and process) are available. These are fully configurable using the Modbus connection.

Hazardous area operation for the meter is possible using compliant barrier modules for the data and power connections.

Moreover it retains all known benefits of OPTIMASS:

- All sensor materials stainless steel, Hastelloy and titanium
- All standard, as well as hygienic process connections
- High performance with simple installation
- Certified to all relevant industry application and process approvals



Technical data

Communication protocol	Modbus RTU over RS485
Baud rate	9600 ... 38400 baud
Power supply	12 V DC \pm 5% and 200 mA max. current
Cable required	2 x twisted pair with overall screen (1 pair power and 1 pair signal)
Maximum cable length	300 m / 1000 ft
Connection topography	Point-to-point or multidrop
Functionality	Full ability to program meter measurement configuration. All measurement variables available as readable address registers.
Hazardous area applications	(for 7010 C only)
ATEX (pending)	EEx ib IIC T6
FM (pending)	Class I Div 1; class I Div 2

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